



The effect of heat waves on mental health in a temperate Australian city

Author(s): Hansen A, Bi P, Nitschke M, Ryan P, Pisaniello D, Tucker G
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Abstract:

Objective: The goal of this study was to identify mental, behavioral, and cognitive disorders that may be triggered or exacerbated during heat waves, predisposing individuals to heat-related morbidity and mortality. **Design:** Using health outcome data from Adelaide, South Australia, for 1993–2006, we estimated the effect of heat waves on hospital admissions and mortalities attributed to mental, behavioral, and cognitive disorders. We analyzed data using Poisson regression accounting for overdispersion and controlling for season and long-term trend, and we performed threshold analysis using hockey stick regression. **Results:** Above a threshold of 26.7°C, we observed a positive association between ambient temperature and hospital admissions for mental and behavioral disorders. Compared with non-heat-wave periods, hospital admissions increased by 7.3% during heat waves. Specific illnesses for which admissions increased included organic illnesses, including symptomatic mental disorders; dementia; mood (affective) disorders; neurotic, stress related, and somatoform disorders; disorders of psychological development; and senility. Mortalities attributed to mental and behavioral disorders increased during heat waves in the 65- to 74-year age group and in persons with schizophrenia, schizotypal, and delusional disorders. Dementia deaths increased in those up to 65 years of age. **Conclusion:** Our results suggest that episodes of extreme heat pose a salient risk to the health and well-being of the mentally ill. **Relevance to Clinical or Professional Practice:** Improvements in the management and care of the mentally ill need to be addressed to avoid an increase in psychiatric morbidity and mortality as heat waves become more frequent.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

Climate Change and Human Health Literature Portal

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact: 

specification of health effect or disease related to climate change exposure

Injury, Mental Health/Stress

Mental Health Effect/Stress: Childhood Behavioral Disorder, General Mental Effect/Stress, Mood Disorder, Psychological Development Disorder, Schizophrenia/Delusional Disorder, Stress Disorder

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type: 

format or standard characteristic of resource

Research Article

Timescale: 

time period studied

Time Scale Unspecified